

# AUTOMATION SYSTEMS ENGINEERS... A New Tool Is Available to You!

Do you work in the field of machine and process automation systems? Have you ever wondered if you have the right methods? And if you are using them correctly? The OIQ has a new competency profile for members who deal with machine and process automation systems.

With 35 years of experience at Honeywell, Réjean Daudelin, Eng., is currently an inspector at the OIQ. As a participant in the working groups that developed this new competency profile, he answered our questions. To provide complete and relevant information in this profile, various engineers who are experts in automation systems were involved so that the main aspects would be covered: operations, provider experience and consulting engineering.

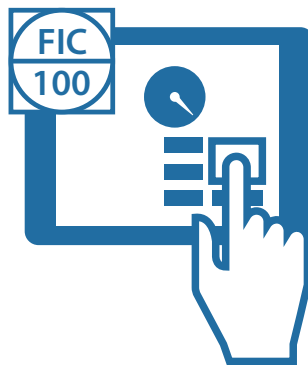
## **PLAN: What are the main technical challenges of automation systems?**

**Réjean Daudelin:** In this field, engineers need to be informed of technological innovations and constantly update their knowledge. There is no doubt in my mind that artificial intelligence will play an increasingly larger role in automation. Another less technical challenge involved in automation is the job losses. It is true that when you automate a manufacturing process or a machine, the main goal is to cut costs or increase the efficiency and speed of operations. On the one hand, this causes certain positions to be discontinued, but on the other, new better paid positions are also created or restructured to supervise these automated machines, improve and service them.

## **PLAN: What is the engineer's role in setting up automation systems?**

**R. D. :** Automation engineers participate in the design of automated control systems for machinery and equipment or to control the process. They select the technologies required for the projects and their compatibility, development and the continuous improvement of equipment and systems.

They may at times program equipment (programmable automatons, robots, distributed control systems, etc.). In some



cases, they design control panels and select the electrical components and instrumentation. These engineers participate in the shop and plant testing, perform pre-operational checks, and commission and service the equipment or systems.

## **PLAN : What types of innovations can engineers introduce?**

**R. D. :** Just think of industry 4.0 and the related processes that have been recently set up in some companies. Through it, digital data can be processed, interconnected and analyzed using elaborate algorithms. The objective: automate production flows by streamlining the decision-making process. Automation engineers will also need to have many competencies in software engineering to develop these specific and distinctive applications.

## **PLAN : Are automated systems the way of the future for young engineers?**

**R. D. :** Absolutely! Robotics, artificial intelligence, industry 4.0 and even digital plants are all areas that will evolve rapidly. To be able to optimize their working methods intelligently, companies will need to coordinate their workers' or collaborators' activities and their automation systems for the entire organization using an end-to-end centralized platform. This new approach will provide amazing job opportunities to our young engineers, who will develop and install these systems.

To find out more, go to [competences.oiq.qc.ca](http://competences.oiq.qc.ca).